

WHAT IS CLAIMED IS:

1. A data output system for establishing a connection between an output terminal for outputting data and a position management terminal for generating mobile terminal position information for specifying the position of a mobile terminal on the basis of a communication state between the mobile terminal and a base station so that the data output system can communicate with the output terminal and the position management terminal, and for outputting data requested, by a user of the mobile terminal, to be output using the output terminal,

wherein the mobile terminal position information is obtained from the position management terminal, and

data output control of the output terminal is performed on the basis of the positional relationship between the mobile terminal position specified by the obtained mobile terminal position information and the output terminal position specified by output terminal position information for specifying the position of the output terminal.

2. A data output system for establishing a connection between an output terminal for outputting data and an output control terminal for performing data output control of the output terminal so that they can communicate with each other, for establishing a connection between the output control terminal and a position management terminal for generating mobile terminal position information for specifying the position of a mobile terminal on the basis of a communication state between the mobile terminal and a base station so that they can communicate with each other, and for outputting data requested, by a user of the mobile terminal, to be output using the output terminal,

wherein the output control terminal includes:

storage means for storing output terminal position information for specifying the position of the output terminal; and

position information obtaining means for obtaining the mobile terminal position information from the position management terminal; and

the data output control of the output terminal being performed on the basis of the positional relationship between the mobile terminal position specified by the mobile terminal position information obtained by the position information obtaining means and the output terminal position specified by the output terminal position information in the storage means.

3. A data output system according to Claim 2, wherein the output control terminal transmits a data output request to the output terminal when the mobile terminal position is within a predetermined range on the basis of the output terminal position.

4. A data output system according to Claim 2, wherein the output control terminal transmits a data output request to the output terminal when the mobile terminal position is within a predetermined range on the basis of the output terminal position and when a predetermined period of time has passed since the mobile terminal position became within the predetermined range.

5. A data output system according to any one of Claims 2 to 4, wherein the data output system establishes a connection between the output control terminal and the mobile terminal so that they can communicate with each other,

the output control terminal includes control command storage means for storing a specific control command for controlling a specific function of the output terminal,

when the mobile terminal position is within a predetermined range on the basis of the output terminal position, the output control terminal transmits a list from which the specific control command is selectable to the mobile terminal, and

when the output control terminal receives the selection of the specific control command, the output control terminal transmits the specific control command in the control command storage means to the output terminal.

6. A data output system according to Claim 5, wherein the output control terminal transmits the list from which the specific control command is selectable to the mobile terminal when the distance between the output terminal position and the mobile terminal position is less than or equal to a predetermined value.

7. A data output system according to one of Claims 5 and 6, wherein, when the output control terminal receives a registration request for registering the output terminal from the mobile terminal, the output control terminal transmits a transmission request for transmitting the control command list to the output terminal corresponding to the registration request,

when the output control terminal receives the control command list in response to the transmission of the transmission request, the output control terminal registers the mobile terminal position information obtained by the position information obtaining means as the output terminal position information in the storage means, and registers the received control command list in the control command storage means so that the control command list corresponds to the output terminal position information, and

when the output terminal receives the transmission request for transmitting the control command list, the output terminal transmits the control command list including the specific control command to the output control terminal.

8. A data output system according to any one of Claims 5 to 7, wherein the output control terminal transmits a response request to the output terminal,

when the output control terminal receives no response in response to the output request, the output control terminal reads from the storage means the output terminal position information for the output terminal which gives no response,

on the basis of the mobile terminal position information obtained by the position information obtaining means, the output control terminal searches for the mobile terminal which is within a predetermined range on the basis of the output terminal position specified by the read output terminal position information,

the output control terminal transmits to the detected mobile terminal a presence confirmation request for confirming the presence of the output terminal which gives no response, and

when the output control terminal receives no presence confirmation in response to the presence confirmation request, the output control terminal clears the registration of the output terminal which gives no response.

9. A data output system according to any one of Claims 2 to 8, wherein the output terminal is a printer.

10. A data output system according to any one of Claims 2 to 8, wherein the output terminal is a projector.

11. An output control terminal for establishing a connection between a position management terminal and an output terminal in a data output system as set forth in Claim 2 so as to communicate with the position management terminal and the output terminal, comprising:

storage means for storing output terminal position information for specifying the position of the output terminal; and

position information obtaining means for obtaining mobile terminal position information from the position management terminal;

wherein data output control of the output terminal is performed on the basis of the positional relationship between the mobile terminal position specified by the mobile terminal position information obtained by the position information obtaining means and the

output terminal position specified by the output terminal position information in the storage means.

12. A program to be applied to output control terminal which is made up of the computer as set forth in Claim 11,

the program making a computer execute processing in which

data output control performed on the basis of the positional relationship between the mobile terminal position specified by the mobile terminal position information obtained by the position information obtaining means and the output terminal position specified by the output terminal position information in the storage means.

13. A data output method for establishing a connection between an output terminal for outputting data and a position management terminal for generating mobile terminal position information for specifying the position of a mobile terminal on the basis of a communication state between the mobile terminal and a base station so that the data output system can communicate with the output terminal and the position management terminal, and for outputting data requested, by a user of the mobile terminal, to be output using the output terminal,

wherein the mobile terminal position information is obtained from the position management terminal, and

data output control of the output terminal is performed on the basis of the positional relationship between the mobile terminal position specified by the obtained mobile terminal position information and the output terminal position specified by output terminal position information for specifying the position of the output terminal.

14. A data output method for establishing a connection between an output terminal for outputting data and an output control terminal for performing data output control of the output terminal so that they can communicate with each other, for establishing a connection between the output control terminal and a position management terminal for generating mobile terminal position information for specifying the position of a mobile terminal on the basis of a communication state between the mobile terminal and a base station so that they can communicate with each other, and for outputting data requested, by a user of the mobile terminal, to be output using the output terminal,

wherein the output control terminal includes the step of:

storing output terminal position information for specifying the position of the output terminal; and

obtaining the mobile terminal position information from the position management terminal; and

the data output control of the output terminal being performed on the basis of the positional relationship between the mobile terminal position specified by the obtained mobile terminal position information and the output terminal position specified by the stored output terminal position information.

15. A data output method according to Claim 14, wherein the output control terminal transmits a data output request to the output terminal when the mobile terminal position is within a predetermined range on the basis of the output terminal position.

16. A data output system according to Claim 14, wherein the output control terminal transmits a data output request to the output terminal when the mobile terminal position is within a predetermined range on the basis of the output terminal position and when a predetermined period of time has passed since the mobile terminal position became within the predetermined range.

17. A data output method according to any one of Claims 14 to 16, wherein the data output method establishes a connection between the output control terminal and the mobile terminal so that they can communicate with each other,

the output control terminal stores a specific control command for controlling a specific function of the output terminal, and

when the mobile terminal position is within a predetermined range on the basis of the output terminal position, the output control terminal transmits a list from which the specific control command is selectable to the mobile terminal, and

when the output control terminal receives the selection of the specific control command, the output control terminal transmits the stored specific control command to the output terminal.

18. A data output method according to Claim 17, wherein the output control terminal transmits the list from which the specific control command is selectable to the mobile terminal when the distance between the output terminal position and the mobile terminal position is less than or equal to a predetermined value.

19. A data output method according to one of Claims 17 and 18, wherein, when the output control terminal receives a registration request for registering the output terminal from the mobile terminal, the output control terminal transmits a transmission request for transmitting the control command list to the output terminal corresponding to the registration request,

when the output control terminal receives the control command list in response to the transmission of the transmission request, the output control terminal registers the obtained mobile terminal position information as the output terminal position information, and registers the received control command list so that the control command list corresponds to the output terminal position information, and

when the output terminal receives the transmission request for transmitting the control command list, the output terminal transmits the control command list including the specific control command to the output control terminal.

20. A data output method according to any one of Claims 17 to 19, wherein the output control terminal transmits a response request to the output terminal,

when the output control terminal receives no response in response to the output request, the output control terminal reads the stored output terminal position information for the output terminal which gives no response,

on the basis of the obtained mobile terminal position information, the output control terminal searches for the mobile terminal which is within a predetermined range on the basis of the output terminal position specified by the read output terminal position information,

the output control terminal transmits to the detected mobile terminal a presence confirmation request for confirming the presence of the output terminal which gives no response, and

when the output control terminal receives no presence confirmation in response to the presence confirmation request, the output control terminal clears the registration of the output terminal which gives no response.